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Medical Malpractice Allegations in Nasal Turbinate Surgery

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Abstract

Background: Despite studies showing most patients significantly improve their nasal congestion with surgical management of nasal turbinates, not all achieve acceptable results. Rarely, patients report substantial worsening of symptoms leading to litigation risk.

Objective: Document the United States medicolegal environment for nasal turbinate surgery.

Methods: We searched the Westlaw database for turbinate related terms for 1987- July 2019, recording demographics, claims, legal arguments, and outcomes in legal cases related to nasal turbinate surgery. We assessed prevalence and correlations with case outcomes.

Results: Of the 39 cases identified, the most common complaint was nose/facial pain (53.8% of cases). Surgeons prevailed in 87.2% of cases, with total liabilities of $3,224,606 [mean $97,715.3, ±$283,900.8]. Surgeons had statistically significant favorable outcomes when patients claimed dryness, headache, congestion, crusting, breathing problems, and disfigurement (all $p < 0.05$). Revision surgery was indicated in 23.1% of cases and was claimed in 40.0% of patient awards. Surgical negligence was claimed in 40.0% of patient awards versus 67.9% of surgeon awards ($p = 0.333$). Lack of informed consent was claimed in 20.0% of patient awards versus 32.1% of surgeon awards ($p = 0.601$).

Conclusions: There are inherent litigation risks for surgeons when performing nasal turbinate surgery. Most claims against surgeons, are resolved in favor of the surgeon. Understanding the types of claims and legal arguments that are made by patients could help assessing the risks of a proposed litigation. Documenting clear indications for surgery and written informed consent may reduce litigations against surgeons.

Keywords

empty nose syndrome, medical malpractice, medicolegal, submucosal resection, turbinate, turbinate reduction, turbinectomy

Introduction

The inferior turbinates warm and humidify airflow through the nose, create turbulence to aid penetration of airflow into the sinonasal cavities and the olfactory cleft. Numerous etiologies can cause hypertrophy which often leads to the perception of nasal congestion.

Despite the long history of turbinate surgery, controversy exists related to indications and techniques of the procedure. In the 1895 British Medical Journal, Dr. Macnaughton Jones "deprecated the increase in turbinotomy."[1] The dangers of turbinate surgery were considered "very great" and included "haemorrhage, septic infection, and ozaena". These same concerns, though uncommon, persist to the modern surgical era.[2]

As with any procedure that involves risk, litigation can occur when patients perceive an untoward outcome. Whether it be persistent nasal congestion, need for additional surgery, dryness, pain, or a combination of these symptoms encompassed in the term coined by Kern, "Empty Nose Syndrome" ("ENS"), there are many

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examples of litigation against surgeons.[3] The objectives of this paper were to document the demographics, complaints, and outcomes of litigation regarding turbinate surgery in the United States.

Materials and Methods

We acquired publicly filed court documents for legal cases from the Westlaw legal database (Thomson Reuters, New York, NY) from 1985 to July 2019 using the following Boolean searches:

> In all sections: "medical malpractice" AND "turbinate" OR "empty nose syndrome" OR "empty nose" OR "turbinate reduction" OR "turbinoplasty" OR "inferior turbinoplasty" OR "secondary atrophic rhinitis" OR "atrophic rhinitis" OR "turbinate surgery" OR "surgery of turbinates" OR "turbinectomy" OR "total turbinectomy" OR "partial turbinectomy" OR "subtotal turbinectomy" OR "submucosal turbinectomy"

> In All States & Federal and Jury Verdicts & Settlements sections: "turbinate! surger!" OR "surger! #of turbinate!" OR "turbinectom!" OR "turbinoplast!" OR "submucosal resection!" OR "turbinate! reduction!" OR "turbinate! resection!" OR "operation! #of turbinate!" OR "turbinate! operation!" OR "atrophic rhinitis" OR "empty nose syndrome" OR "dry nose syndrome"

> In All States & Federal and Trial Court Orders sections: "turbinate! surger!" OR "surger! #of turbinate!" OR "turbinectom!" OR "turbinoplast!" OR "submucosal resection!" OR "turbinate! reduction!" OR "turbinate! resection!" OR "operation! #of turbinate!" OR "turbinate! operation!" OR "atrophic rhinitis" OR "empty nose syndrome" OR "dry nose syndrome" AND "dismissed" OR "dismissal" OR "nonsuit" OR "non-suit" OR "summary judgement"

This database is commonly used by attorneys as a reliable source for locating publicly filed court documents in the United States and has been used previously in publications across several disciplines of medicine to report on medicolegal issues.[4–6] As the data from this database was deidentified, this retrospective records review met exclusion criteria for needing review by the University of Washington Human Subjects Review Board.

We searched the database for unique cases. We excluded court documents based on the following exclusion criteria: (1) Unrelated Claims - complaints of harm unrelated to the turbinate surgery; (2) Criminal Complaints – claims that were clearly beyond surgical negligence (e.g. fraud); (3) Wrongful Death – claims of death after turbinate surgery associated with anesthesia; (4) Missed Diagnosis – claims that turbinate surgery or treatment was not provided; and (5) Incidental Results – cases where turbinate surgery was not performed, but the filing referenced "turbinates."

We recorded demographic data including age, gender, surgery date, and state of legal action.[7] We recorded the type of turbinate surgery performed, any concurrent surgeries, alleged harms claimed by plaintiff patients (hereinafter referred to as "patients"), and the final legal outcomes. When cases were appealed, we recorded the final appellate decision. Where certain data were unavailable on Westlaw, we directly contacted the relevant courthouse to confirm the final disposition. We obtained the specialty for each defendant surgeon (hereinafter referred to as "surgeon") through online licensure database search and published online material.

We performed statistical analysis with Microsoft Excel utilizing a two-tailed student t-test with unequal variance of two samples for comparisons with a cut off for significance of $p < 0.05$.[7]

Results

Case Characteristics

325 initial court documents were obtained with 123 duplicate court documents removed, leaving a total of 202 cases. Of these cases, 39 cases were included and 163 cases were excluded based on the exclusion criteria as follows: (1) Unrelated Claims, 50 cases (15.4%); (2) Criminal Complaints, 8 cases (2.5%); (3) Wrongful Death, 11 cases (3.4%); (4) Missed Diagnoses, 10 cases (3.1%); and (5) Incidental Search results, 84 cases (25.8%).

Of these 39 cases, 11 cases (28.2%) reported patient age with a mean age of 39.4 years (std.dev 20.1). All 39 cases (100.0%) reported gender, with 20 females (51.3%) and 19 males (48.7%). 36 cases (92.3%) reported the dates of surgery, with surgical dates spanning from April 1987 to July 2013. All 39 cases (100.0%) reported legal jurisdiction, with cases in 19 states, the top three states being California (11 cases, 28.2%), New York (5 cases, 12.8%), and Ohio (3 cases, 7.7%) (Figure 1). Surgeon specialties were obtained for 37 cases (94.9%), with 33 (89.2%) otolaryngology (including dual boarded), 3 (8.1%) plastics, and 1 dental oral maxillofacial surgeon (2.7%).

Surgeries Performed

37 of the 39 cases (94.9%) reported the type of turbinate surgery, with 28/37 cases (75.7%) being turbinate reduction (submucosal resection), 6/37 cases (16.2%) being turbinate resections, and 4/37 (10.8%) being bilateral outfractures of turbinates (one case had both a turbinate reduction and outfracture performed). Of the turbinate

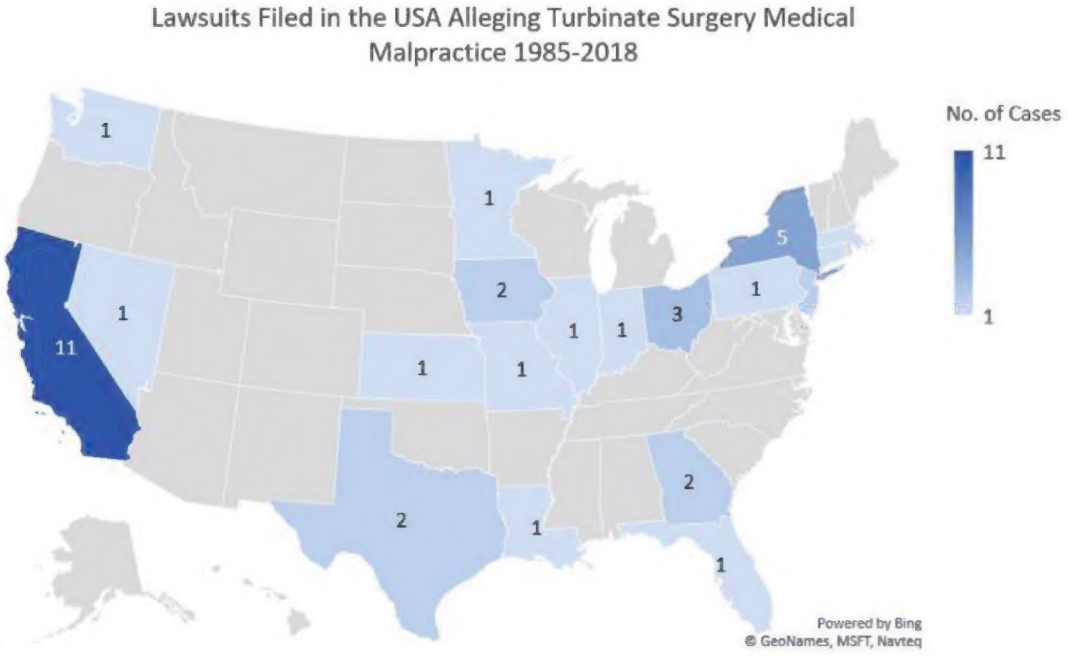

Figure 1. Lawsuits filed in the USA Alleging Turbinate Surgery Medical Malpractice 1985–2018. Jurisdiction was obtained for all 39 cases. The states with the highest number of cases identified were California (11 cases, 28.2%), New York (5 cases, 12.8%), and Ohio (3 cases, 7.7%).

reductions 20/27 (74.1%) were further specified as follows: 14/27 (51.9%) bilateral inferior turbinate reductions; 3/27 (11.1%) unilateral middle turbinate reductions; 2/27 (7.4%) bilateral turbinates (unspecified to superior, middle, inferior); and 1/27 (3.7%) bilateral middle turbinate reduction.

Only 8/39 cases (20.5%) were solely turbinate surgery. The other 31 cases (79.5%) involved multiple surgeries with the most prevalent concomitant procedure being septoplasty in 24 cases (61.5%)

Claims

All 39 cases (100.0%) reported specific complaints, (i.e. allegations of the harm the patient suffered, a critical piece of their legal argument), with the median number of specific patient complaints of 3 (std.dev 2.2) per case, and a range of 1 to 8. Of 125 types of complaints in the 39 cases, the most prevalent were: nose/facial pain 21/39 (53.8%); need for revision/additional surgery in 9/39 (23.1%); and ENS and congestion 8/39 (20.5%).

Of the 20 cases that did not link complaints to the turbinate surgery, 5 (25.0%) involved claims where the complaint was tied to another medical aspect of the case. A full listing of the categorical complaints is shown in Figure 2.

Outcomes and Correlations

Of the 34 cases that specified the litigation outcome (87.2%), surgeons prevailed (obtained either a favorable jury verdict or dismissal) in 28 cases (82.4%), patients prevailed in 5 cases (14.7%), and 1 case settled (2.9%). Total liabilities from all the cases was $3,224,606 with a mean jury award of $97,715.3 (std.dev $283,900.8), and range of $0 to $1,237,812. While most case outcomes favored surgeons, when the verdict favored the patient the mean award was $644,921.3 (std.dev $451,294.4) with a range of $160,000 to $1,237,812. The case that settled was reportedly resolved for a payment between $500,000 and $1,000,000.

All 5 patient verdicts (100.0%) involved turbinate reduction (submucosal resection) surgeries, whereas 22 of the 28 surgeon awards (78.6%) involved turbinate reductions ($p = 0.022$). The remaining surgeon awards involved 5 (17.9%) turbinate resections and 1 (3.6%) unspecified type of turbinate surgery. Slightly more patient awards were won on bilateral inferior turbinate surgery (50.0%) versus surgeon won cases of (33.3%), although not statistically significant ($p = 0.614$).

There was no difference in the number of concomitant procedures for patient awards versus surgeon awards, with a median of 1 for each ($p = 0.929$).

Only 1 (20.0%) of the 5 cases where claims of harm were tied to another aspect of the case involved a verdict in favor of the patient with an award of $500,000.

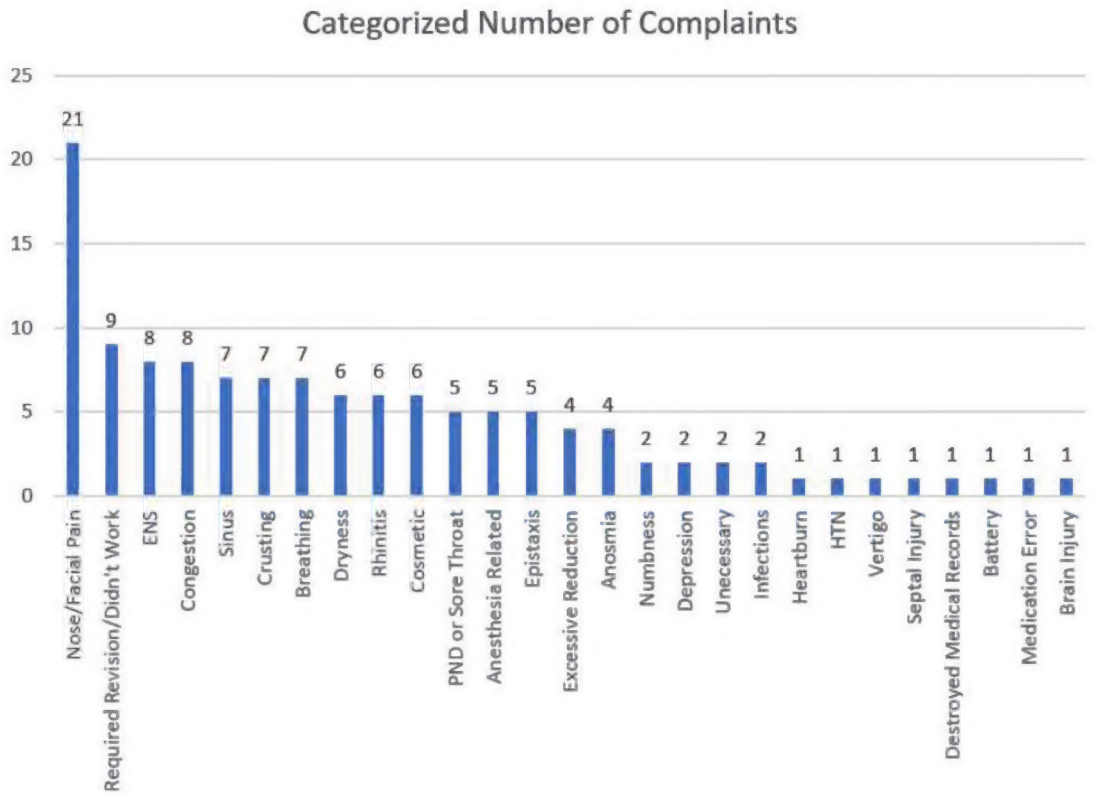

Figure 2. Categorized number of complaints. All 39 cases reported specific complaints with a total number of reported complaints of 125. The most common were nose/facial pain 21/39 (53.8%), need for revision/additional surgery in 9/39 (23.1%), and empty nose syndrome and congestion, each 8/39 (20.5%).

Patients verdicts included the following 16 complaints: 2 of 5 (40.0%) claimed they required surgical revision, and 1 of 5 (20.0%) claimed either atrophic rhinitis, epistaxis, facial pain, rhinitis, post nasal drip, anosmia, reactive depression, damage to turbinates, hypoxic ischemic encephalopathy, medication error, brain injury, or memory defects. Revision surgery or poor outcome (insufficient improvement) were the complaints with the largest difference in patient awards versus surgeon awards, with 40.0% of patient awards making this complaint and only 17.9% of surgeons defending these complaints, although this was not statistically significant ($p = 0.428$). Complaints that did show statistical significance, and all in the surgeon's favor were dryness (0.0% versus 21.4%, $p = 0.011$), headache (0.0% versus 32.1%, $p = 0.001$), congestion (0.0% versus 28.6%, $p = 0.003$), crusting (0.0% versus 25.0%, $p = 0.006$), breathing problems (0.0% versus 14.3%, $p = 0.043$), and disfigurement (0.0% versus 14.3%, $p = 0.043$).

The most prevalent liability claim was that surgery was not indicated; occurring in 1 of 5 (20.0%) patient awards versus 4 of 28 (14.3%) surgeon awards ($p = 0.797$). Surgical negligence claims had the least likely chance of patient awards, with only 40.0% of patient awards claiming this and 67.9% of surgeon awards defending this claim, although not statistically significant ($p = 0.333$). Informed consent claims arose in 1 of 5 (20.0%) patient awards versus 9 of 28 (32.1%) surgeon awards ($p = 0.601$). Of these, 0% of the patient awards made the defense of a signed consent, while 2 of the 9 (22.2%) surgeon awards referred to there being a signed consent on file though did not show statistical significance ($p = 0.161$) (Figure 3).

Discussion

This study reviewed over 30 years of claims data in the Westlaw legal database for claims related to turbinate surgery. Given that time frame, there was a relatively low number of cases that made it into the legal database for analysis. Of the cases entered, the majority resolved in favor of the surgeon. Nonetheless, those claims carried plaintiff complaints of headache, facial or nasal pain, need for revision surgery, nasal congestion, and Empty Nose Syndrome. The claims primarily related to inadequate indication for surgery, surgical negligence, and lack of informed consent.

Most cases were in the state of California. While California has the highest number of Medicare beneficiaries in the nation, it is closely followed by the states of

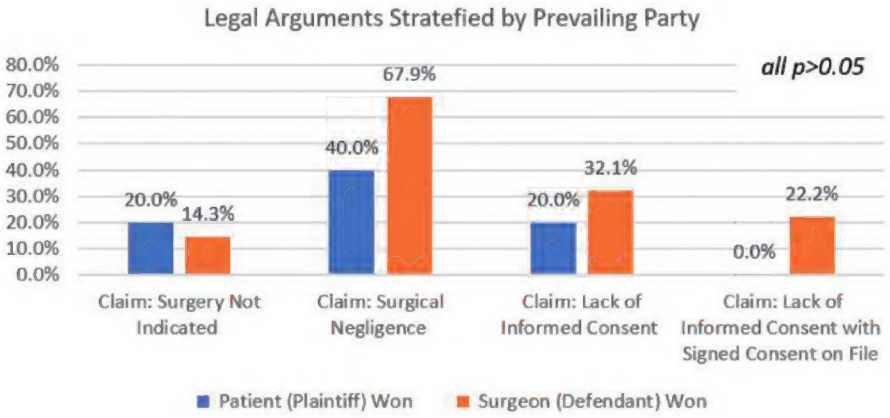

Figure 3. Legal arguments stratified by prevailing party. When claims were made of surgery's not being indicated, patients prevailed in 20% of cases whereas surgeons prevailed in 14.3%. When other claims of surgical negligence and lack of informed consent were made, verdicts in favor of surgeons were more prevalent.

Texas and Florida, which had 10 times less turbinate litigation.[8] California has the largest number in all states, but only by 1.1 to 1.8 times that of Texas and Florida, respectively.[9] A possible cause for the relatively high number of cases in California is that there are more turbinate surgeries performed in California than these other states, or that the number of total legal claims are similar, but that there is something unique about the judicial system in California causing more cases to be brought to court (and thus documented in the Westlaw database) in California versus being settled or dropped in the other states. Interestingly, California has a "cap" on non-economic (e.g. pain and suffering) damages, yet this does not appear to be a deterrent. The answer may lie in the percentage of patient awards in California that we identified – 0%, indicating that surgeons may be less willing to settle out of court in California because they have a higher likelihood of winning in court, increasing the number of cases that end up litigation and trial.

The statistics shows that turbinate resection may be "safer" than turbinate reduction from a litigation perspective as 100% of the patient awards were turbinate reductions and only 78.6% were turbinate resections. This is likely a result of the low sample size (four cases). Additionally, turbinate resections can have more negative outcomes than turbinate reductions.[10] When looking at dates of the cases of turbinate resection, the most recent case involved a surgery from 2002, suggesting a decrease in turbinate resections over time and litigation from these surgeries is a lagging indicator.

There is a binary distribution of the jury awards, whereby when patients win there is a positive distribution, and when surgeons win, it is zero. With 15.3% of surgeons facing malpractice claims each year and 98.4% of surgeons facing at least one malpractice claim in their career, malpractice claims and the fear of litigation is rightfully on the minds of surgeons.[11] However, estimates of as low as 2% of tort claims make it to trial.[12] With these broader estimates of incidence of malpractice claims and claims going to trial applied to our findings of the mean awards in turbinate surgery litigation, we estimate the annual cost to surgeons to be $284 (15.3% *2%*$92,980). While this figure is derived in an indirect manner and does not incorporate out-of-court settlements, we estimate the annual indemnity of all surgeons to be 1.6%, with a mean indemnity of $274,887 representing a cost of $4,398 annually.[11] Thus the annual costs to surgeons of awards is relatively low, in particular when compared to the costs of malpractice insurance and the inherent fear by surgeons of malpractice claims.

A recent study examined 94 litigations between 2010 and 2019 naming otolaryngologists as defendants.[13] Rhinology was the most implicated subspecialty at 28% of all cases. Endoscopic sinus surgery was the most prevalent procedure with a complication leading to litigation related to orbit or intracranial penetration. The paper did not specify litigation or complications from turbinate surgery or septoplasty. In fact, there is a paucity of research related to septoplasty-only litigation and represents a need for additional research.

This study yielded some guidance for surgeons. There was a clear difference in the percentage of patient awards to that of surgeon awards when the claim was "surgery was not indicated" or non-surgical negligence (20% to 14.3%) versus claims of surgical negligence (40% to 67.9%) or lack of informed consent (20% to 32.1%). And even more stark when the case indicated a signed consent was on file (0% to 22.2%). These outcomes suggest that surgeons can reduce their litigation risk by following simple standard of care techniques as they discuss turbinate surgery with their patient, including ensuring

and documenting clear indications for surgery, discussing the risks of the procedure and the reasonable alternatives, and obtaining informed consent in writing with the patient's signature.

Furthermore, otolaryngologists should be aware of the rare outcome of (ENS) possibly associated with turbinate surgery. ENS and nasal congestion accounted for 20% of the cases in this data set. This untoward outcome is challenging to explain given that the vast majority of patients who have complete turbinate resection for sinus cancer or for recalcitrant maxillary sinus disease who have endoscopic medial maxillectomies or mega-antrostomies do so well with no complaints of ENS. Nonetheless, it is worth considering mucosal preservation techniques when performing turbinate reductions for nasal congestion as well as counseling patients about this rare outcome.

This study findings are limited by low sample sizes, reporting limitations of the case documents and their relationship to the litigatory environment. There is an inherent bias in the drafting of legal documents depending on which party drafts the case document for which conclusion they are trying to achieve. Westlaw is a primary resource for the legal industry, although it is not comprehensive. Legal claims do not always go to trial. Rather, most medical malpractice actions are settled or dismissed prior to trial and thus not reported in Westlaw.

Conclusions

There are inherent litigation risks for surgeons performing nasal turbinate surgery. This study showed that most claims made against surgeons that progress to trial are resolved in favor of the surgeon, though those that do result in patient awards are monetarily significant (mean $644,921). Most claims involved bilateral inferior turbinate reductions. The most common reasons for litigation involved headache, nose or facial pain, and need for revision surgery. However, these results may not be generalizable to just turbinate surgery as a minority of the claims involved additional surgical procedures performed concomitantly with the turbinate surgery. Confirming and documenting clear indications for surgery, and communicating these to patients, could minimize the risks of litigation. In addition, conducting and documenting signed informed consent plays an important role in protecting both patients and surgeons.

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